

## REMARKS

Reconsideration and allowance of the subject application are respectfully solicited in view of the following remarks.

Claims 1, 7, 8, and 10 are pending, with Claims 1 and 10 being independent.

Claims 1, 7, 8 and 10 stand rejected under 35 U.S.C. § 102(e), over U.S. Patent No. 6,674,949 B2 (Allan et al.).

Independent Claims 1 and 10 relate to an optical deflector comprising a photonic crystal and external force application means. The external force application means applies a mechanical external force to the photonic crystal section in a direction perpendicular to the direction of cyclicity of a cyclic structure of the photonic crystal section so as to shift the angle of refraction in the photonic crystal section.

On December 12, 2006, Applicant submitted arguments, after final rejection, traversing the outstanding rejection. In the Advisory Action dated January 8, 2007, the Examiner indicated that the arguments were not persuasive because Figure 23 of Allan et al. depicts an external force application means located above a crystal section, which exerts a gravitational force in a direction perpendicular to the direction of cyclicity.

Applicant submits that Claim 1 is allowable over Allan et al. for the reasons set forth in the arguments submitted on December 12. Also, Applicant requests that the Examiner reconsider his position with respect to Figure 23. Figure 23 is “a cross-sectional view of a mechano-optic planar photonic crystal defect waveguide device” (column 6, lines 56-57), illustrating in cross-section, a controller 56, a slab of material 122, an upper clad region 106, and an actuator 154. No reference numerals or symbols are used to denote the


force application direction or the direction of cyclicity. In addition, the only other description of Figure 23 is found at column 10, lines 17-42 of the specification, and this description does not discuss either the direction of application of a mechanical external force or the direction of cyclicity of a cyclic structure of a photonic crystal.

Applicant respectfully submits that an external force is not being applied in a direction perpendicular to the direction of a cyclic structure, in the system depicted in Figure 23. Also, if the Examiner is somehow arguing inherency of the feature, the Examiner must establish that such a force *must* necessarily be present in the reference to support the conclusion. MPEP § 2112.

In view of the above remarks, Applicant requests favorable reconsideration of the rejection.

Applicant's attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

  
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